

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF MINES  
MOUNT HOPE, WEST VIRGINIA

January 23, 1957

Health and Safety  
District C

Mr. W. R. Park, District Supervisor  
Health and Safety District C  
U. S. Bureau of Mines  
Mount Hope, West Virginia

Subj: Report on a coal outburst  
No. 27 mine, Island Creek  
Coal Company, Ragland, Mingo  
County, West Virginia

Dear Mr. Park:

An investigation was made December 12, 1956, of a coal outburst which occurred at approximately 11:30 a.m. on Friday, December 7, 1956, in No. 3 room right off of 5 butt left, 4 south mains. The loading machine operator's helper was slightly injured by a small piece of coal, resulting from the coal outburst.

The immediate roof was of sandstone of undetermined thickness, overlaid with alternate shale and sandstone beds to the surface, a total vertical distance of approximately 468 feet. The coal ranged from 42 to 48 inches in thickness, and the floor was a firm consolidated shale, which had a high resistance to "heaving".

The mine was developed by a room-and-pillar method. Main and cross entries were driven 24 feet wide on 50-foot centers. Room entries were driven 22 feet wide on 60-foot centers and rooms were driven 28 feet wide on 50-foot centers, thus room entry pillars were 38 feet, and room pillars were 22 feet wide. Crosscuts were about 80 feet apart, partial recovery of the pillars was accomplished by driving "lifts" from 26 to 28 feet wide through the narrow width of the pillars. A small block of coal was left on each end of the pillars. This type of mining does not induce good pillar falls, and results in excessive weight being thrown on the outby pillars; the pillars become overloaded resulting in coal outbursts.

The aforementioned outburst occurred when No. 3 room was approaching the core of an unusually large pillar block that had been left in 6 butt left when the area was originally mined. Outbursts occurred simultaneously in three pillars in the same general area.

Copy to: Mr. Westfield (3)  
Mr. Weaver  
~~Mr. Thomas~~  
Mr. Ferguson, UMWA  
Mr. Cordray  
Files

The roof was supported by line posts on 4-foot centers lengthwise with 6 to 8 roof bolts being installed per cut. The 5/8-inch bolts used were of 1040 steel and ranged from 30 to 48 inches in length. Additional timbering and/or bolts were used where needed.

Following the underground investigation, a conference was held with the superintendent and mine foreman; at this conference the following recommendations were made to reduce the possibilities of coal outbursts in this area:

- (1) The mining system should be projected so that the pillars can be recovered, to the fullest extent possible, by the open-end method in a systematic manner.
- (2) If the present system of partial pillar recovery is continued in the 4 south area, cribs should be installed to supplement the roof-control method being used.
- (3) Consideration should be given to leaving a pillar or pillars of sufficient size intact in the 4 south mains and the mouth of 5 butt left to relieve the stresses on the outby area.

Respectfully submitted,

/s/ E. M. Lewis

E. M. Lewis  
Health and Safety Engineer

/s/ W. M. Cordray

W. M. Cordary  
Health and Safety Engineer

6 BUTT LEFT

COAL OUTBURST  
NO. 27 MINE  
ISLAND CREEK COAL COMPANY  
RAGLAND, MINGO COUNTY, WEST VIRGINIA  
DECEMBER 7, 1956

NOTE: PILLARS RUPTURED SUDDENLY ARE SHOWN THUS

STRATA OVER COAL = 468 feet

coal thickness 48

SOUTH

